

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claims 1-16 (canceled)

Claims 17-22 (canceled previously)

Claims 23-26 (canceled)

Claims 27-39 (canceled previously)

Claims 40-43 (canceled)

Claims 44-50 (canceled previously)

51. (Previously Presented) A method of making a mold from shape memory materials for manufacturing castable composite parts with resins which are solidified within said mold by application of a curing temperature, said method comprising the steps:

- a) providing said shape memory material with a glass transition temperature which exceeds said curing temperature, wherein said shape memory material comprises an embedded thermal energy generation means;
- b) processing said shape memory material into a memorized shape; and
- c) deforming said shape memory material from said memorized shape into a desired mold shape.

52. (Previously Presented) The method of claim 51 wherein said thermal energy generation means comprises an electrical conductor.

53. (Previously Presented) The method of claim 51 wherein said thermal energy generation means comprises thermally conductive fibers.

54. (Currently Amended) The method of claim 4 51 wherein the shaped shape memory material is processed into a memorized shape that is in the form of a flat sheet.

55. (Currently Amended) The method of claim 4 51 wherein the shaped shape memory material is processed into a memorized shape that is an inverted image of the desired mold shape.

56. (Currently Amended) The method of claim 4 51 wherein the shaped shape memory material is transparent.

57. (Previously Presented) A method of making a mold for use in manufacturing castable composite parts, said parts being cast with resins that solidify within said mold upon application of a curing temperature, said method comprising the steps:

- a) providing a mold material of shape memory polymer having a glass transition temperature which exceeds the curing temperature of the castable composite part to be formed in the mold;
- b) processing said shape memory material into a memorized shape; and
- c) deforming said shape memory material from said memorized shape into a desired mold shape, wherein said desired mold shape is different from said memorized shape such that the mold expels the cast composite part therefrom when the shape memory polymer is caused to revert to its memorized shape.

58. (Previously Presented) The method of claim 57 further comprising embedding a thermal energy generation means in the shape memory polymer.

59. (Previously Presented) The method of claim 58 wherein said thermal energy generation means comprises thermally conductive fibers.

60. (Previously Presented) The method of claim 58 wherein the shaped memory material is processed into a memorized shape that is in the form of a flat sheet.

61. (Previously Presented) The method of claim 58 wherein the shaped memory material is processed into a memorized shape that is an inverted image of the desired mold shape.

62. (Previously Presented) The method of claim 58 wherein the shaped memory material is transparent.

63. (New) The method of claim 58 wherein said thermal energy generation means comprises an electrical conductor.

64. (New) The method of claim 57 wherein said processing of said shape memory material is by die casting.

65. (New) The method of claim 57 wherein said processing of shape memory material is by extrusion.

66. (New) The method of claim 57 wherein said processing of said shape memory material is by molding and annealing.

67. (New) The method of claim 57 wherein said deforming of said shape memory material is by draping.

68. (New) The method of claim 57 wherein said deforming of said shape memory material is by vacuum forming.

69. (New) The method of claim 57 wherein said deforming of said shape memory material is by computer aided mechanical technology.

70. (New) The method of claim 57 wherein said deforming of said shape memory material is by stamping.

71. (New) The method of claim 73 wherein said stamping of said shape memory material is performed with said shape memory material below said glass transition temperature.

72. (New) The method of claim 73 wherein said stamping of said shape memory material is performed with said shape memory material above said glass transition temperature.

73. (New) The method of claim 51 wherein said shape memory material is a shape memory polymer.

74. (New) The method of claim 57 wherein said shape memory material is a shape memory polymer.